Environmental Assessment for

Bat Gate Construction

Death Valley National Park
Nye County, Nevada

File # DEVA-NEPA-02-032

Public comment period ends February 10, 2003

Please send comments to:

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1.0 Introduction

The National Park Service proposes to construct a metal cage cupola over the two natural openings of Devil's Hole #2. The cupola would allow bats to fly in and out of the hole while preventing human entry. It would measure about 14 feet wide by 24 feet long by 4 feet high, with a cement foundation collar, and a locked entry door.

The cupola would be constructed as part of an interagency bat gate training course sponsored by 5 entities – Bat Conservation International, Inc.; U.S. Borax Inc.; California Department of Conservation; U.S. Fish and Wildlife Service; and Death Valley National Park. The training course will take place February 18 through March 1, 2003. The workshop will consist of two identical, back-to-back, one-week training sessions. Each session will be for 10 participants. The classes will be held at the U.S. Borax facilities at Ryan, California.

The workshop will provide instruction on the several aspects of bat gate construction, site selection, preparation, and maintenance of bat gates for the continued conservation of bat species.

Devil's Hole #2 is not part of the nearby natural water-filled cave known as Devil's Hole, and it does not have habitat for the endangered Devil's Hole pupfish (*Cyprinodon diabolis*). Devil's Hole #2 is on National Park Service land and is within the boundary of Death Valley National Park.

1.1 Purpose and Need

The purpose of the project is to cover the openings of Devil's Hole #2 to provide for human safety, and to construct a bat-friendly covering to protect bat habitat, and to take advantage of the free labor provided by the training course.

The need for the project is to prevent injuries from falls into the hole in this publicly accessible portion of the national park, and to protect rare bat species' habitat in this site that has been identified as an important maternity colony.

Bats prefer a cupola with horizontal bars a few feet above the ground, for easy access and egress in flight (if a closure is necessary to keep people out). The present cupola at the site extends only 2 feet above the ground level, and the proposed cupola would extend 4 feet above the ground.

The present cupola covers 1 of the 2 openings, and the second opening is covered with flat metal netting. The proposal is to construct 1 larger and higher cupola to cover both openings, and to remove both old coverings.

1.2 Environmental Issues

The environmental issues driving the need for a NEPA (National Environmental Policy Act) analysis document (that is, an Environmental Assessment [EA] over a simple Categorical Exclusion) is the proposed new surface disturbance, the visual intrusion, and the new permanent structure. Furthermore, a NEPA analysis was not done on the existing structures.

1.4. Scope of Analysis

This EA examines the removal of the existing cupola structure and metal netting, and the replacement of these structures with a larger cupola and cement collar. It also examines the construction of an earthen berm to shield the new structure.

This EA looks at the vehicular and equipment access and egress from the project site, and the closure and rehabilitation of the administrative access road to Devil's Hole #2.

This EA does not address issues of the nearby Devil's Hole -- habitat management of the endangered Devil's Hole pupfish, physical security of the fenced closure area, and visitor management and interpretation issues.

This EA is limited to actions on NPS land. It does not deal with the three other sites to be physically closed during the February training course since they are located on U.S. Borax lands outside the national park.

This EA does not deal with recent or future research involving Devil's Hole #2. The project does, however, insure future access by researchers through a locked door in the cupola.

1.4. Decision to be Made

After the public review period and an analysis of the public comments and the EA, the park superintendent will decide which alternative or combination of alternatives to select. While additional mitigation measures are not anticipated their need may come to light as a result of the public review and they may be added.

After an alternative is selected, the park superintendent will determine whether it has a significant impact on the human environment. If he determines that it does not have a significant impact, he will recommend the action to the regional director. If the regional director concurs, he will sign a Finding of No Significant Impact (FONSI) and the selected alternative may be implemented.

If the park superintendent or regional director determine that the selected alternative does or may have a significant impact, then an Environmental Impact Statement (EIS) will be initiated, the proposal will be dropped, or the proposal will be revised and a new EA will be initiated.

1.5. Regulatory Environment

In completing this EA, the NPS has maintained conformity with the following:
- NPS Organic Act of 1916
- California Desert Protection Act of 1994
- General Authorities Act
- National Environmental Policy Act (NEPA)
- National Historic Preservation Act
- Federal Cave Resources Protection Act of 1988
- Endangered Species Act
- Wilderness Act of 1964
- Timbisha Shoshone Homeland Act
- Code of Federal Regulations (CFR)
- NPS Management Policies of 2001
- NPS Director's Order 77 on Natural Resources
- NPS Director's Order 12 on NEPA
- General Management Plan, Death Valley National Park, 2001

2.0 Proposed Action and Alternatives

Two alternatives, the proposed action and the no action, have been developed for analysis in this assessment.

2.1. The Proposed Action

The proposed action is to construct a steel bar (angle iron) cupola at Devil's Hole #2 using the labor from a February bate gate workshop training course to accomplish the work. There are 2 natural openings at Devil's Hole #2. Both openings would be covered by a single metal cage cupola. It would measure about 14 feet wide by 24 feet long by 4 feet high. It would have a cement foundation collar on 3 sides. The fourth side would be up against a rock face. It would have a locked access door to allow researchers or others under permit to enter the hole vertically on a rope. It would have an expanded metal top. It would be painted by a suitable lead-free anti-rust paint to make it less visible to visitors. The administrative access road to Devil's Hole #2 would be rehabilitated to a natural appearance. See the attached drawing.

This is the park's preferred alternative.

2.1.1. Mitigation Measures – The 14 mitigation measures below are part of the proposed action.

1. Equipment will be pressure washed prior to traveling to the site. This is to prevent the introduction of weeds.
2. Sand, gravel or other fill material will not be imported. This is to prevent the introduction of weeds.
3. If buried archeological artifacts are uncovered during the project, all activity will stop, and every effort will be made to protect the artifacts, and the park archeologist will be notified as soon as possible.
4. Off-road driving, excavation, and other surface disturbance will be limited to the smallest feasible area to accomplish the project.
5. Removal of perennial trees and shrubs will be limited to the smallest number feasible to accomplish the project.
6. The footprint of development will be limited to the smallest feasible area to accomplish the project.
7. There will be no night work or night lighting. This is to protect night sky visibility and prevent visual intrusion.
8. The visible portions of the cupola will be painted a cryptic color to lessen the visible impact of the structure.
9. The painting of the cupola material will be at the shop rather than in the field so that paint and fumes do not enter the hole.
10. An earthen berm will be constructed to make the cupola less visible to visitors.
11. The administrative vehicular access route will be closed and treated to encourage natural vegetation growth and to reduce erosion.
12. Construction material or debris will not be allowed to fall into Devil's Hole #2.
13. For safety considerations, there will be no human entry into Devil's Hole #2 during construction.
14. After the construction, the hole will be monitored by the park wildlife biologist for bat use. This is to confirm that the bats have accepted the new bat gate cupola design.

2.2. The "No Action" Alternative

Under this alternative, no new bat gate construction would take place in the park. The smaller cupola and metal net closure would be left as they are. The access route to Devil's Hole #2 would not be rehabilitated to a natural appearance.

2.3. Other Alternatives Considered but Rejected and Not Analyzed in Detail

2.3.1. Raise the height of the existing cupola and leave the second opening alone. The bridge between the two holes may not be stable, so covering both holes with one structure, as proposed, is safer.

2.3.2. Construct closures at additional NPS sites as part of the training course. One other NPS site was considered and rejected because of cultural resource concerns. Other NPS sites were not located, but a sufficient number of sites were located on nearby private land to satisfy the needs of the training course.

2.3.3. Close the Devil's Hole #2 openings with a fence exclosure rather than a bat gate cupola. This would be preferable for the bats, if the fence was sufficiently wide and was effective in keeping people from molesting the bat maternity colony in the hole. This was rejected, however, because of the visual intrusion that a fence exclosure would cause. This was also rejected because such fence exclosures have been shown to be ineffective in protecting people from dangerous shafts and holes.

2.3.4. Remove the existing closure structures and leave the openings in their natural condition. This would be hazardous to people who might fall into the hole. This would be hazardous to the bats' maternity colony because people could get in and molest the bats. This would be hazardous to the natural cave itself because people could get in and damage the interior of the hole.

2.4. Environmentally Preferable alternative

The Proposed Action, described as Alternative 2.1, is the environmentally preferable alternative.

3.0 Affected Environment

3.1. Cave Resources

Devil's Hole #2 is a natural rock opening to an underground cave. The straight drop of about 20 feet is followed by a steep angle drop of about 20 feet more, ending in a loose rock rubble pile. With this configuration, it is a dangerous feature for people due to fall hazard.

Beyond the rock rubble pile there is a passage to open water. This water is the area water table, and is assumed to be hydrologically connected to Devil's Hole. Devil's Hole is about ¼ mile distant.

There are no geologic cave formations – stalactites, stalagmites or similar features. There are no known cave-adapted invertebrates.

3.2. Wildlife – Bats

There are no federally threatened or endangered wildlife species within the area of potential effect, however bats are known to occur in Devil's Hole #2. The hole is a maternity colony for Townsend's big-eared bats, *Corynorhinus townsendii*. This is a California and NPS species of special concern. All bat species are protected in Nevada. The park wildlife biologist surveyed the site for bats in June 2002 and observed 29 Townsend's big-eared bats including young.

3.3. Vegetation

The site is very arid and few perennial plants are within the area of potential effect, mostly creosote and holly-leaf saltbush. Desert annuals and non-vascular plants are present but may not be apparent for most of the year. The site was surveyed by the park botanist in 2002. No significant or rare species were noted in the area of potential effect and no concerns were raised.

3.4. Cultural Resources

The site was surveyed by the park archeologist. No cultural artifacts were found and no cultural concerns were identified in the area of potential effect.

3.5. Scenic and Visual Resources

The site is in a natural desert rural landscape of Nevada in the Devil's Hole adjunct unit of Death Valley National Park. The park boundary is not clearly defined to the normal observer and the park land blends in with the nearby BLM and FWS land nearby, ¼ to ½ mile away. The site is about ¼ mile from the nearest public road, a county-maintained dirt road. The site is on the lower slope of a steep rocky hill about 2,600 feet elevation and is not noticeable from the road unless it is pointed out by someone. There are no residences or buildings within more than a mile.

3.6. Wilderness

The site is not wilderness, nor is wilderness nearby.

3.7. Native American

The site is not part of the Timbisha Shoshone Homeland. No tribal concerns have been identified with the area of potential effect.

4.0 Impacts

4.1 Impacts of the Proposed Action

4.1.1. Cave Resources – The project would not impact the cave resources except for the surface opening itself. At the surface opening there would be excavation for a wooden form, a cement collar poured into the form and the form would be removed. The steel bar cupola would be built on the cement form. No debris would be allowed to fall into the hole during construction.

4.1.2. Wildlife – The project would be done in February when the bat maternity colony is not present so there would be no direct impact. Indirect impact would be the presence of a new and improved bat gate structure that the bats must fly through when they return. No other wildlife would be affected by the project. The habitat of the endangered Devil's Hole pupfish would not be impacted. No painting would be done at the site, so there would be no possibility of paint or paint fumes entering the hole. No debris would be allowed to fall into the hole during construction.

4.1.3. Vegetation – The project would not have a significant impact on vegetation.

4.1.4. Cultural Resources – The project would not have a significant impact on cultural resources. The old cupola and the old metal net are not historic. Prehistoric human use of the hole is not known nor is it suspected. No artifacts were found and no concerns were raised.

4.1.5. Scenic and Visual Resources -- The project would produce a more visible steel cupola at the site. It would be painted (off site) a cryptic color as mitigation. The access route is more noticeable from the public road than is the hole, even with the present small cupola. The access route would be rehabilitated to a natural appearance as mitigation. The cupola would be partially hidden by an earthen berm at the end of the access road as mitigation.

4.1.6. Wilderness – The site is not wilderness, nor is wilderness nearby, so there would be no impact on park wilderness resources or values.

4.1.7. Native American – The site is not part of the Timbisha Shoshone Homeland. No tribal concerns have been identified with the area of potential effect. The project would have no impact on Native American issues or concerns.

4.2 Impacts of the "No Action" Alternative

4.2.1. Cave Resources – Implementation of the "no action" alternative would have no impact on cave resources. The hole would still be protected from most entry by people.

4.2.2. Wildlife – Implementation of the "no action" alternative would have no additional impact on bats that use the hole. The bats have a difficult time flying in and out of the current bat gate cupola so to leave it as is would not mitigate current impacts on the bats. It would continue the access by bats, although not with an optimal design of a bat gate. The hole would still be protected from most entry by people.

4.2.3. Vegetation – Implementation of the "no action" alternative would have no impact on vegetation.

4.2.4. Cultural Resources – Implementation of the "no action" alternative would have no impact on cultural resources.

4.2.5. Scenic and Visual Resources – Implementation of the "no action" alternative would have no impact on scenic and visual resources. The visibility of the access route would not be improved by restoring to a natural condition.

4.2.6. Native American – Implementation of the "no action" alternative would have no impact on Native American issues or concerns.

4.2.7. Wilderness – Implementation of the "no action" alternative would have no impact on wilderness. The site is not in or near wilderness.

4.3 Cumulative Impacts

The project is related to other past, ongoing, and future projects in and near the park – mine safety closures, bat gates, restoration of old roads, and Devil's Hole site planning.

4.3.1. Mine Safety Closures – Hundreds of abandoned mineral lands (AML) sites exist in the park and on nearby BLM and private lands. The park has an active AML program managed by the park mining engineer. The park is developing an AML Plan, which will be accompanied by an EA. It will address mine closures, including metal netting, gates and cupolas. This project at Devils Hole #2 is a predecessor of the many such projects that will be covered in a programmatic way in the AML Plan EA.

4.3.2. Bat Gates – Many AML sites and a few natural caves in the park have bat use. Many of the bats are species of special concern, though none in the park are federally listed. The park is concerned with the protection of bat habitat in mines and caves. Generally, it is thought that bat habitat can be best protected if these mines and caves are closed to human use (including occasional recreational exploration), and open to the easy passage of flying bats through metal bar gates. For vertical shafts or holes, it is thought that metal bar cupola designs similar to the proposal in this EA, are best for protecting bat habitat. This project at Devil's Hole #2 is the predecessor of the many such projects that will be covered in a programmatic way in the AML Plan EA. A bat management plan is not anticipated.

4.3.3. Restoration of Old Roads – Dozens of old roads exist in the park, many in wilderness designated by Congress in 1994. The park is actively maintaining their closure to vehicular use by restoring them to a natural condition. In most cases, this involves activities near the old road's junction with an open road, where the old road is signed, a berm is constructed, rocks are used to block the old road, or vertical mulch is installed to hide the old road. Most of the miles of old closed road are not treated but are left to revert to a natural condition on their own by plant growth and erosion. This project at Devil's Hole #2 includes the restoration of the access route to a natural condition. It will be an example of a technique that may likely be used for other stretches of road throughout the park, following NEPA review for those future projects.

4.3.4. Devil's Hole Site Planning – The Devil's Hole adjunct unit of Death Valley National Park includes the Devil's Hole, which is a natural water-filled vertical cave containing the entire wild world population of *Cyprinodon diabolis*, the federally endangered Devil's Hole pupfish. This is the smallest known habitat in the world for a vertebrate species. The pool is of such critical importance that it has been closed to public entry for decades with a chain link fence and closure signs. The public can view the hole and the pool from a platform outside the fence about 30 yards from the pool. There is a draft proposal to enlarge the enclosure fence and to make other changes to the general Devil's Hole site for the better protection of the fish and their habitat and for better interpretation. The access route to Devil's Hole #2 is part of this site planning effort. This project at Devil's Hole #2 is complementary to those plans. The Devil's Hole Site Plan and EA will be completed and issued for public review at some later date.

4.4 Non-impairment

The impacts resulting from the project would have a long-term effect on the park. The effects would be both positive (better bat habitat protection, better human exclosure from the hole, and restoration of the access route) and negative (visual intrusion and increased development footprint from a larger cupola and earthen berm). In sum, the project would not impair those resources or values that are key to the natural or cultural integrity of the park. Park resources and values are defined in the enabling legislation and in the General Management Plan. Selection of the "no action" alternative would also not result in impairment. The project, with the mitigation measures, would not impair park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. Implementation of the project would not violate the NPS Organic Act of 1916.

4.5 Methodologies

The methods used to determine the impacts of the alternatives on the various park resources were field surveys by park staff. Vegetation impacts were determined by the park botanist. Cultural resource impacts were determined by the park archeologist. Wildlife impacts were determined by the park wildlife biologist.

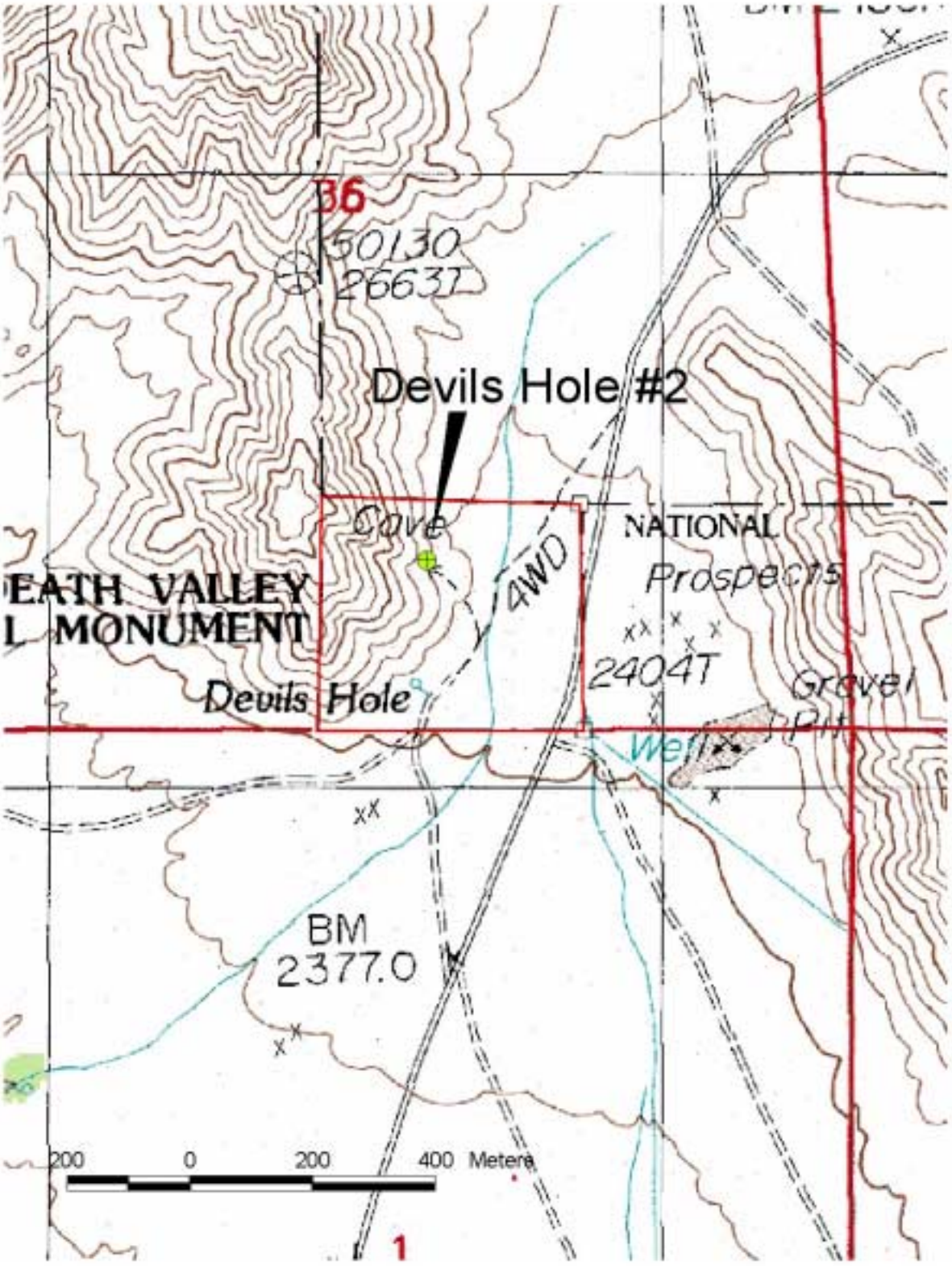
5.0 Consultation and Coordination

Dick Anderson, environmental specialist at Death Valley National Park prepared this EA with advice and consultation from the people listed below. Unless otherwise noted, they are park staff. They have not necessarily seen the final proposal or this final EA. They do not necessarily concur with the analysis in this EA, and they may or may not recommend the proposed action.

Cristi Baldino	Housing Officer & Bat Biologist
Terry Baldino	Assistant Chief of Interpretation
Mick Rauschkolb	Principal Land Agent, U.S. Borax Inc.
Richard Boland	Administrative Assistant, Resources Management
John Burghardt	Geologist, Geologic Resource Division, WASO, Denver
Doug Craig	Manager, Abandoned Mine Lands Unit, Office of Mine Reclamation, California Department of Conservation
Bob Currie	Biologist, U.S. Fish and Wildlife Service, North Carolina
Kat Eisenman	Superintendent's Secretary
Mel Essington	Mining Engineer, **Project Lead**
Terry Fisk	Hydrologist
Ed Forner	Park Ranger, Pilot
Shawn Goodchild	Biologist, U.S. Fish and Wildlife Service, Las Vegas
Linda Greene	Chief of Resource Management Division

Lynn Hendrickson	Engineering Technician
Viola Kennison	Environmental Program Director, Timbisha Shoshone Tribe
Linda Manning	Biological Technician - Wildlife
Nancy Mitton	Wildlife Biologist
Marian O'Dea	Chief of Administration Division
Dan Reinkensmeyer	Biologist, U.S. Fish and Wildlife Service, Las Vegas
JT Reynolds	Superintendent
Ryan Taylor	Mining Technician
Kelly Turner	Archeologist
Faith Watkins	North American Bats & Mines Project Director, Bat Conservation International, Inc.
Ed Winchester	Frontier Environmental Solutions, Ridgecrest, CA
Nancy Wizner	Chief Ranger
Gerry Wolfe	Safety and Occupational Health Specialist
Dana York	Botanist

This document is available to the public and comments are requested. Comments will be accepted for a minimum of 30 days. After receiving and evaluating public comments the park superintendent will select an alternative and may stipulate additional mitigation measures. If the superintendent finds that the selected alternative and mitigation measures will not significantly affect the quality of the human environment, a Finding of No Significant Impact (FONSI) may be prepared and forwarded to the Pacific West Regional Director for approval. If the FONSI is approved the project construction may begin.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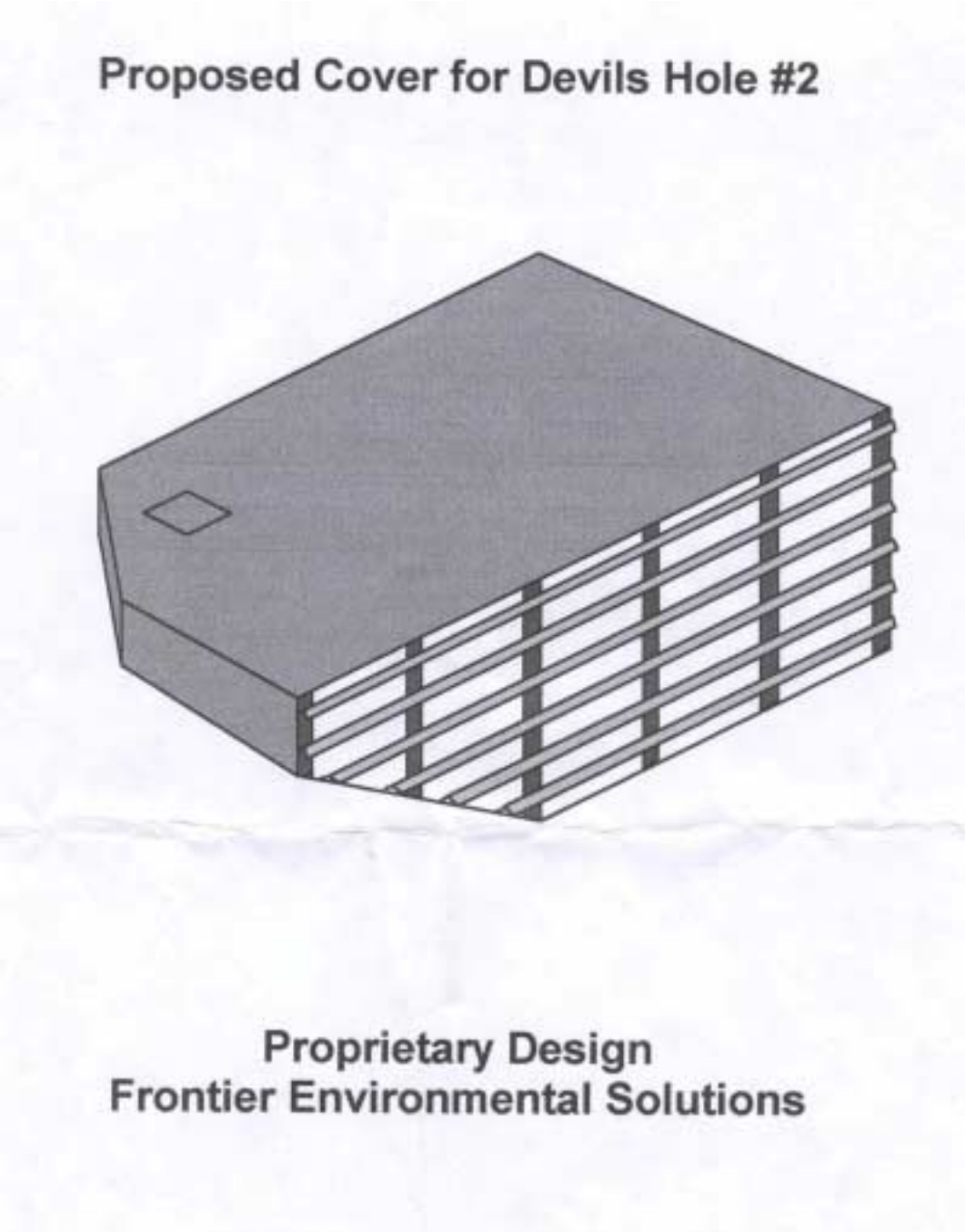
Proposed Cover for Devils Hole #2
Proprietary Design
Frontier Environmental Solutions